Detailed Data Tables and Technical Notes: Who is dying with HIV/AIDS, and how has this changed over time?

Technical Notes:

To describe who is dying with HIV/AIDS and how this has changed over time, these tables and accompanying fact sheet present a profile of deaths among individuals diagnosed with HIV infection and AIDS for the 5 year period of 1999 – 2003. Additionally, information about deaths among people reported with AIDS for the ten year period 1994 to 2003, as well as the years 1985 and 1990, are included for historical perspective. Death data are not available for people reported with HIV infection (non- AIDS) prior to 1999, as HIV infection was not a reportable condition before this time.

Death data presented in this analysis include all deaths among people reported with HIV infection and those with AIDS in Massachusetts. This includes deaths from *non-HIV related* causes, such as motor vehicle crashes, drug overdoses and suicides. Therefore, the number of deaths reported here will vary from the number of *HIV-related* deaths reported in *Massachusetts Deaths* by the Massachusetts Department of Public Health, Center for Health Information, Statistics, Research and Evaluation.

On an annual basis, the HIV/AIDS Surveillance program matches all reports of individuals living with HIV/AIDS against that year's vital statistics file of all individuals who died within Massachusetts. Additionally, providers report deaths among their patients and death certificates which indicate HIV/AIDS among reported underlying conditions are received by the HIV/AIDS surveillance program.

Table 1 Ranking of 10 leading causes of death among persons 25-44 years of age: Massachusetts, 2002

Cause	Ranking	N	% of Total Deaths (N=2,490)
Cancer	1	427	17%
Injuries of undetermined intent	2	339	14%
Unintentional injuries	3	280	11%
Heart disease	4	267	11%
Suicide	5	173	7%
Signs and symptoms[1]	6	172	7%
HIV/AIDS	**7**	**101**	**4%**
Homicide	8	74	3%
Chronic liver disease	9	64	3%
Diabetes	10	45	2%

[1] Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99). This category includes symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified.
Data Source: Center for Health Information, Statistics, Research and Evaluation, Massachusetts Deaths 2002

Table 2 Deaths among Persons Reported with HIV Infection (non-AIDS) and AIDS by Year of Death: MA, 1985 - 2003

	HIV	AIDS	Total HIV + AIDS
Year	N	N	
1985	--[1]	119	--[1]
1990	--[1]	631	--[1]
1993	--[1]	1,040	--[1]
1994	--[1]	1,207	--[1]
1995	--[1]	1,152	--[1]
1996	--[1]	767	--[1]
1997	--[1]	377	--[1]
1998	--[1]	316	--[1]
1999	45	319	364
2000	38	302	340
2001	52	341	393
2002	59	263	322
2003	68	245	313

[1] HIV Reporting was implemented in 1999, therefore there are no data for deaths among people with HIV who did not progress to AIDS during this time period; Data Source MDPH HIV/AIDS Surveillance Program, Data as of 7/1/04

Table 3 Deaths among Persons Reported with HIV and AIDS by Gender, Race/Ethnicity and Exposure Mode: MA, 1999-2003

	HIV		AIDS		Total
Gender:	N	%	N	%	N
Male	172	66%	1,075	73%	**1,247**
Female	90	34%	395	27%	**485**
Race/Ethnicity:	N	%	N	%	N
White Non-Hispanic	131	50%	742	50%	**873**
Black Non-Hispanic	79	30%	383	26%	**462**
Hispanic	48	18%	335	23%	**383**
Asian/Pacific Islander	1	<1%	6	<1%	**7**
American Indian/Alaska Native	1	<1%	4	<1%	**5**
Unknown	2	1%	0	0%	**2**
Exposure Mode:	N	%	N	%	N
Male-to-male Sex (MSM)	38	15%	294	20%	**332**
Injection Drug Use (IDU)	161	61%	771	52%	**932**
MSM/IDU	6	2%	67	5%	**73**
Heterosexual Sex (HTSX)	21	8%	123	8%	**144**
Other	1	<1%	44	3%	**45**
Total Undetermined	35	13%	171	12%	**206**
• Presumed HTSX[1]	21	8%	102	7%	**123**
• Undetermined[2]	14	5%	69	5%	**83**
Total	**262**	**100%**	**1,470**	**100%**	**1,732**

[1] Heterosexual sex with partners with unknown risk and HIV status
[2] Includes those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up
Data Source MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/04

Table 4 Deaths among Persons Reported with HIV/AIDS by Gender and Year of Death: MA, 1999 - 2003

	Male		Female		Total
Year	**N**	**%**	**N**	**%**	**N**
1999	275	76%	89	24%	**364**
2000	247	73%	93	27%	**340**
2001	281	72%	112	28%	**393**
2002	236	73%	86	27%	**322**
2003	208	66%	105	34%	**313**

Data Source MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/04

Table 5 Deaths among Persons Reported with HIV/AIDS by Place of Birth and Year of Death: MA, 1999 - 2003

	US		Puerto Rico/ US Dependency[1]		Non-US		Total
Year	**N**	**%**	**N**	**%**	**N**	**%**	**N**
1999	275	76%	67	18%	22	6%	**364**
2000	261	77%	61	18%	18	5%	**340**
2001	311	79%	49	12%	33	8%	**393**
2002	249	77%	46	14%	27	8%	**322**
2003	250	80%	41	13%	22	7%	**313**

[1] 97% of people diagnosed with AIDS who were born in a US Dependency were born in Puerto Rico
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/04

Table 6 Deaths among Persons Reported with HIV/AIDS by Race/Ethnicity and Gender and Year of Death: MA, 1999 - 2003

Data as of July 1, 2004

MA Total:	1999		2000		2001		2002		2003	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
White NH	175	48%	174	51%	215	55%	147	46%	162	52%
Black NH	93	26%	81	24%	108	27%	100	31%	80	26%
Hispanic	91	25%	82	24%	69	18%	72	22%	69	22%
API	2	1%	2	1%	0	0%	2	1%	1	<1%
AI/AN	3	1%	1	<1%	1	<1%	0	0%	0	0%
Total N[1]	**364**	100%	**340**	100%	**393**	100%	**322**	100%	**313**	100%

Males:	1999		2000		2001		2002		2003	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
White NH	139	51%	135	55%	156	56%	117	50%	106	51%
Black NH	68	25%	50	20%	71	25%	68	29%	48	23%
Hispanic	64	23%	59	24%	53	19%	48	20%	52	25%
API	2	1%	2	1%	0	0%	2	1%	1	<1%
AI/AN	2	1%	1	<1%	1	<1%	0	0%	0	0%
Total N[1]	**275**	100%	**247**	100%	**281**	100%	**236**	100%	**208**	100%

Females:	1999		2000		2001		2002		2003	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
White NH	36	40%	39	42%	59	53%	30	35%	56	53%
Black NH	25	28%	31	33%	37	33%	32	37%	32	30%
Hispanic	27	30%	23	25%	16	14%	24	28%	17	16%
API	0	0%	0	0%	0	0%	0	0%	0	0%
AI/AN	1	1%	0	0%	0	0%	0	0%	0	0%
Total N[1]	**89**	100%	**93**	100%	**112**	100%	**86**	100%	**105**	100%

[1] Totals includes people of unknown race/ethnicity
NH=Non-Hispanic, API=Asian/Pacific Islander, AI/AN=American Indian/Alaska Native
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/04

Table 7 Deaths among Persons Reported with HIV/AIDS by Exposure Mode and Gender and Year of Death: MA, 1999 - 2003

Data as of July 1, 2004

MA Total:	1999		2000		2001		2002		2003	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
MSM	67	18%	63	19%	82	21%	63	20%	57	18%
IDU	193	53%	189	56%	201	51%	183	57%	166	53%
MSM/IDU	15	4%	13	4%	18	5%	14	4%	13	4%
HTSX	31	9%	23	7%	28	7%	26	8%	36	12%
Other	13	4%	13	4%	7	2%	7	2%	5	2%
Total Undet.	45	12%	39	12%	57	14%	29	9%	36	12%
• Pres. HTSX[1]	29	8%	27	8%	29	7%	20	6%	18	6%
• Undetermined[2]	16	4%	12	4%	28	7%	9	3%	18	6%
Total N	**364**	**100%**	**340**	**100%**	**393**	**100%**	**322**	**100%**	**313**	**100%**

Males:	1999		2000		2001		2002		2003	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
MSM	67	24%	63	26%	82	29%	63	27%	57	27%
IDU	141	51%	129	52%	127	45%	124	53%	103	50%
MSM/IDU	15	5%	13	5%	18	6%	14	6%	13	6%
HTSX	10	4%	4	2%	12	4%	7	3%	14	7%
Other	11	4%	10	4%	2	1%	5	2%	3	1%
Total Undet.	31	11%	28	11%	40	14%	23	9%	18	9%
• Pres. HTSX[1]	16	6%	16	6%	15	5%	15	6%	12	6%
• Undetermined[2]	15	5%	12	5%	25	9%	8	3%	6	3%
Total N	**275**	**100%**	**247**	**100%**	**281**	**100%**	**236**	**100%**	**208**	**100%**

Females:	1999		2000		2001		2002		2003	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
MSM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IDU	52	58%	60	65%	74	66%	59	69%	63	60%
MSM/IDU	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HTSX	21	24%	19	20%	16	14%	19	22%	22	21%
Other	2	2%	3	3%	5	4%	2	2%	2	2%
Total Undet.	14	16%	11	12%	17	16%	6	7%	18	17%
• Pres. HTSX[1]	13	15%	11	12%	14	13%	5	6%	6	6%
• Undetermined[2]	1	1%	0	0%	3	3%	1	1%	12	11%
Total N	**89**	**100%**	**93**	**100%**	**112**	**100%**	**86**	**100%**	**105**	**100%**

MSM=Male-to-male sex; IDU=Injection Drug Use; HTSX=Heterosexual Sex; Undet.=Undetermined; Pres.=Presumed; N/A=Not Applicable

[1] Heterosexual sex with partners with unknown risk and HIV status

[2] Includes those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/04

Technical Notes: Explanation of Crude and Age-Adjusted Rates of Death

A rate of a disease per 100,000 population is a more precise way to compare groups that have substantially different population sizes rather than relying on the raw number of deaths. To adjust for fluctuations in the annual rate of death among people reported with HIV/AIDS, an average annual rate of death for the period 2001 to 2003 is used. The average number of deaths is calculated over the three-year period by adding the total number of deaths among people reported with HIV/AIDS in each of the three years and dividing by three. The crude average annual rate of death is then calculated by dividing the average number of people reported with HIV/AIDS who died during the three years by the entire population (everyone or the sub-population involved) and multiplying by 100,000. (See example 1 below). The Massachusetts Department of Public Health (DPH) Race-Allocated Census 2000 Estimates (MRACE) file is the source of population sizes for these calculations.

Example 1: Calculation of Crude Average Annual Rate of Death among People Reported with HIV/AIDS for White Individuals, Massachusetts, 2001-2003 (3.3 per 100,000)

Crude average annual rate of death among reported HIV/AIDS cases for white individuals, 2001-2003	= ((number of white individuals reported with HIV/AIDS who died in 2001 + number of white individuals reported with HIV/AIDS who died in 2002 + number of white individuals reported with HIV/AIDS who died in 2003) ÷ 3)) ÷ (population size of white individuals) × 100,000 = (((215 + 147 + 162) ÷ 3)) ÷ 5,326,585) × 100,000 = ((524 ÷ 3) ÷ 5,326,585)) × 100,000 = (174.67 ÷ 5,326,585) × 100,000 = 0.0000328 × 100,000 = **3.3**

Sometimes, in addition to the population size being different, the age composition of the populations is different. In Massachusetts, black and Hispanic populations are younger than white. The median age of black people (29.7 years) and Hispanic people (24.5 years) is younger than that of white people (38.8 years). Therefore, it is necessary to “age-adjust” the rate of death among people reported with HIV/AIDS to get a true comparison of the impact of the disease across racial/ethnic groups without an effect from the differences in age composition. Age-adjustment of rates minimizes the distortion created by differences in age composition.

Age-adjusted rates are calculated by weighting the age-specific rates for a given population by the age distribution of a standard population. The age-specific rates are calculated for eleven age groups ranging from less than one year old to 85 years or above and are weighted by the 2000 US standard population. The weighted age-specific rates are then added to produce the adjusted rate for all ages combined. (See example 2 below).

Example 2: Calculation of Age-adjusted Rate of Death among People Reported with HIV/AIDS for White Individuals, Massachusetts, 2001-2003, (3.1 per 100,000)

A	*B*	*C*	*D*	*E*
Age group (in years)	*Average number of deaths among reported HIV/AIDS cases 2001-2003*	*Population (2000)*	*2000 US standard population weight*	*Age-adjusted rate ((B÷C×D)×100,000))*
<1	0	61,381	0.013818	0
1-4	0	245,562	0.055317	0
5-14	0.333333	675,388	0.145565	0.0071843
15-24	2.333333	634,387	0.138646	0.0509953
25-34	11	734,417	0.135573	0.2030594
35-44	67.66667	902,498	0.162613	1.2192248
45-54	68.33333	771,970	0.134834	1.1935252
55-64	20	491,985	0.087247	0.3546734
65-74	3.666667	396,458	0.066037	0.0610747
75-84	0.666667	300,442	0.044842	0.0099502
85+ years	0	112,097	0.015508	0
Total				**3.1**

To see the effect of age-distribution on rates of death see Table 8 below for a comparison of crude and age-adjusted rates by race/ethnicity.

Table 8 Crude and Age-Adjusted Rates of Death among People Reported with HIV/AIDS per 100,000 Population by Race/Ethnicity and Gender: Average Annual Rate 2001 – 2003, MA

Data as of July 1, 2004

State Total:	Crude Rate per 100,000	Age-Adjusted Rate per 100,000
White (non-Hispanic)	3.3	3.1
Black (non-Hispanic)	28.5	31.7
Hispanic	16.3	21.2
Asian/Pacific Islander	0.4	0.4
American Indian/Alaskan Native	2.9	3.5
MA Total Rate	**5.4**	**5.2**

Males:	Crude Rate per 100,000	Age-Adjusted Rate per 100,000
White (non-Hispanic) Males	4.9	4.6
Black (non-Hispanic) Males	38.4	44.2
Hispanic Males	24.1	33.3
Asian/Pacific Islander Males	0.8	0.7
American Indian/Alaskan Native Males	5.8	7.0
MA Total Rate Among Males	**7.9**	**7.6**

Females:	Crude Rate per 100,000	Age-Adjusted Rate per 100,000
White (non-Hispanic) Females	1.7	1.7
Black (non-Hispanic) Females	19.3	20.7
Hispanic Females	8.8	10.5
Asian/Pacific Islander Females	0.0	0.0
American Indian/Alaskan Native Females	0.0	0.0
MA Total Rate Among Females	**3.1**	**3.0**

[1] The denominators for rate calculations are based on year 2000 population estimates from the MDPH Center for Health Information, Statistics, Research and Evaluation, all rates are age-adjusted using the 2000 US standard population
Data Source: MDPH HIV/AIDS Surveillance Program

Technical Notes: Explanation of Case Fatality Rate

The case fatality rate reflects the severity of a disease. It represents the proportion of people reported with HIV/AIDS who died in a specific time period. Unlike other rates, it is usually expressed as a percentage. To adjust for fluctuations in the number of annual deaths among people reported with HIV/AIDS, an average annual case fatality rate for the period 2001 to 2003 is used. The average number of deaths is calculated over the three-year period by adding the total number of deaths among people reported with HIV/AIDS in each of the three years and dividing by three. The average number of people living with HIV/AIDS is calculated by adding the number of people living with HIV/AIDS on January 1st of each year to the number of people newly diagnosed with HIV infection in that year for each of the three years and dividing by three. The average annual case fatality rate is then calculated by dividing the average number of people reported with HIV/AIDS who died during the three years by the average number of people living with HIV/AIDS. (See example 1 below).

Example 1: Calculation of Average Annual HIV/AIDS Case Fatality Rate for White Individuals, Massachusetts, 2001-2003, (2.6%)

Average annual HIV/AIDS case fatality rate for white individuals, 2001-2003	= ((number of white individuals reported with HIV/AIDS who died in 2001 + number of white individuals reported with HIV/AIDS who died in 2002 + number of white individuals reported with HIV/AIDS who died in 2003) ÷ 3)) ÷ ((number of white individuals living with HIV/AIDS on 1/1/2001 + number of white individuals reported with HIV diagnosis in 2001 + number of white individuals living with HIV/AIDS on 1/1/2002 + number of white individuals reported with HIV diagnosis in 2002 + number of white individuals living with HIV/AIDS on 1/1/2003 + number of white individuals reported with HIV diagnosis in 2003) ÷ 3)) = (((215 + 147 + 162) ÷ 3)) ÷ (((6,274 + 393 + 6,452 + 388 + 6,693 + 304) ÷ 3)) = ((524 ÷ 3) ÷ (20,504 ÷ 3)) = (174.67 ÷ 6,834.67) = 0.02556 = **2.6%**

Table 9 HIV/AIDS Case Fatality Rate[1] by Exposure Mode: Average Annual Rate 2001 – 2003, MA

State Total:	Case Fatality Rate[1]
Male-to-male Sex	1.4%
Injection Drug Use	4.0%
Male-to-male Sex/Injection Drug Use	3.1%
Heterosexual Sex	1.5%
Other	2.7%
Presumed Heterosexual Sex[2]	1.2%
Undetermined[3]	3.0%
MA Total Rate	**2.4%**

[1] Case fatality rate = (number of people who died with HIV/AIDS in year) ÷ (number of people living with HIV/AIDS on 1/1 of year + number of people diagnosed with HIV infection during that year)
[2] Heterosexual sex with partners with unknown risk and HIV status
[3] Includes those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up
Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 7/1/04

Table 10 HIV/AIDS Case Fatality Rate[1] by Race/Ethnicity[2] and Gender: Average Annual Rate 2001 – 2003, MA

State Total:	Case Fatality Rate[1]
White (non-Hispanic)	2.6%
Black (non-Hispanic)	2.5%
Hispanic	2.0%
MA Total Rate	**2.4%**
Males:	**Case Fatality Rate[1]**
White (non-Hispanic) Males	2.3%
Black (non-Hispanic) Males	2.7%
Hispanic Males	2.1%
MA Total Rate Among Males	**2.3%**
Females:	**Case Fatality Rate[1]**
White (non-Hispanic) Females	3.5%
Black (non-Hispanic) Females	2.2%
Hispanic Females	1.7%
MA Total Rate Among Females	**2.5%**

[1] Case fatality rate = (number of people who died with HIV/AIDS in year) ÷ (number of people living with HIV/AIDS on 1/1 of year + number of people diagnosed with HIV infection during that year)
[2] Rates for Asian/Pacific Islanders and American Indian/Alaska Natives are not presented due to small numbers
Data Source: MDPH HIV/AIDS Surveillance Program

Technical Notes: Trends in survival after an AIDS diagnosis

The following analyses describe changes over time in the survival of people who are diagnosed with AIDS in Massachusetts.

Tables 11-13 describe how many people died within 1 year of an AIDS diagnosis, between 1 and 2 years, between 2 and 3 years, etc., and up to 10 or more years for all people diagnosed with AIDS from 1987 to 2001. For example, the first column of Table 15 indicates that of 651 people diagnosed with AIDS in 1987, 265, or 41%, died within 1 year of their diagnosis; 159, or 24%, died between 1 and 2 years of their diagnosis; and 94, or 14%, died between 2 and 3 years of their diagnosis.

It should be noted that if a person was diagnosed with AIDS in 2003, only one complete year of survival can be assessed, since this report includes data only up to July 1, 2004. Likewise, a diagnosis of AIDS in 2002 would not allow observation for more than two years, etc. These observations are relevant when interpreting the following tables and especially when comparing the distribution of survival times across years. With these caveats in mind, there has been a fairly consistent decline in the percentage of people who die within two years of an AIDS diagnosis. This most likely reflects higher rates of early diagnosis, and improved care and treatment of people living with AIDS in the Commonwealth.

In comparing survival for people diagnosed in 1988 with people diagnosed in more recent years, it is evident that the proportion of people who are still alive is greater for each successive time period. More people are surviving for longer time periods after being diagnosed with AIDS. Two possible explanations for these increases in survival are that people truly are living longer or it is a reporting artifact. Regarding the latter, the AIDS case definition was expanded in 1993 to include people with a CD4 count below 200. This change in the case definition would mean that as of 1993, more people are counted as having an AIDS diagnosis although they are not as sick as those diagnosed with AIDS in earlier years, leading to longer survival. At the same time, significant advances in treatment over the years certainly account for a significant increase in survival. The increases in survival in the late 80s and early 90s are due to introduction of *Pneumocystis carinii* pneumonia (PCP) prophylaxis, and the movement towards earlier diagnosis and initiation of antiretroviral treatment. Increases in survival in the mid 90's are explained by highly effective antiretroviral therapy.

Table 11 Time from AIDS Diagnosis to Death by Year of AIDS Diagnosis: MA, 1987-1991

	1987		1988		1989		1990		1991	
Years between AIDS Diagnosis and Death	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
<1 yr.	265	41%	277	32%	285	29%	290	27%	360	27%
1 - <2 yr.	159	24%	207	24%	230	23%	214	20%	305	23%
2 - <3 yr.	94	14%	137	16%	163	16%	193	18%	200	15%
3 - <4 yr.	43	7%	70	8%	89	9%	116	11%	118	9%
4 - <5 yr.	18	3%	33	4%	63	6%	59	5%	65	5%
5 - <6 yr.	9	1%	24	3%	46	5%	38	4%	31	2%
6 - <7 yr.	7	1%	12	1%	14	1%	14	1%	13	1%
7 - <8 yr.	5	1%	10	1%	6	1%	10	1%	13	1%
8 - <9 yr.	9	1%	3	<1%	5	1%	10	1%	9	1%
9 - <10 yr.	0	0%	2	<1%	4	<1%	5	<1%	7	1%
10+ yr.	5	1%	13	2%	14	1%	12	1%	17	1%
Still Alive	33	5%	72	8%	81	8%	120	11%	191	14%
Total[1]	**651**	**100%**	**861**	**100%**	**1,000**	**100%**	**1,081**	**100%**	**1,331**	**100%**

[1] Totals include 13 individuals diagnosed with AIDS between 1987 and 2001 where the years between AIDS diagnosis and death is unknown; Data Source: MDPH Surveillance Program; Data as of 7/1/04

Table 12 Time from AIDS Diagnosis to Death by Year of AIDS Diagnosis: MA, 1992-1996

	1992		1993		1994		1995		1996	
Years between AIDS Diagnosis and Death	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
<1 yr.	371	21%	348	20%	296	20%	211	15%	108	9%
1 - <2 yr.	375	21%	352	20%	247	17%	105	8%	43	4%
2 - <3 yr.	297	17%	250	14%	112	8%	55	4%	49	4%
3 - <4 yr.	164	9%	107	6%	52	4%	47	3%	40	3%
4 - <5 yr.	52	3%	48	3%	34	2%	34	2%	36	3%
5 - <6 yr.	31	2%	32	2%	39	3%	30	2%	33	3%
6 - <7 yr.	36	2%	30	2%	24	2%	32	2%	30	3%
7 - <8 yr.	14	1%	31	2%	37	3%	35	3%	12	1%
8 - <9 yr.	31	2%	16	1%	17	1%	10	1%	--[1]	--[1]
9 - <10 yr.	17	1%	18	1%	7	<1%	--[1]	--[1]	--[1]	--[1]
10+ yr.	22	1%	8	<1%	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
Still Alive	339	19%	519	29%	612	41%	838	60%	809	70%
Total[2]	**1,751**	**100%**	**1,760**	**100%**	**1,478**	**100%**	**1,397**	**100%**	**1,161**	**100%**

[1] Individuals diagnosed in this year have not yet had the opportunity to survive this many years before death
[2] Totals include 13 individuals diagnosed with AIDS between 1987 and 2001 where the years between AIDS diagnosis and death is unknown; Data Source: MDPH Surveillance Program; Data as of 7/1/04

Table 13 Time from AIDS Diagnosis to Death by Year of AIDS Diagnosis: MA, 1997-2001

	1997		1998		1999		2000		2001	
Years between AIDS Diagnosis and Death	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
<1 yr.	70	8%	57	6%	66	7%	58	8%	63	9%
1 - <2 yr.	36	4%	33	3%	26	3%	16	2%	18	3%
2 - <3 yr.	31	3%	18	2%	31	3%	17	2%	6	1%
3 - <4 yr.	32	4%	22	2%	21	2%	8	1%	--[1]	--[1]
4 - <5 yr.	35	4%	22	2%	12	1%	--[1]	--[1]	--[1]	--[1]
5 - <6 yr.	17	2%	14	1%	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
6 - <7 yr.	8	1%	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
7 - <8 yr.	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
8 - <9 yr.	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
9 - <10 yr.	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
10+ yr.	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
Still Alive	679	75%	792	83%	759	83%	662	87%	586	87%
Total[2]	**909**	**100%**	**958**	**100%**	**915**	**100%**	**761**	**100%**	**673**	**100%**

[1] Individuals diagnosed in this year have not yet had the opportunity to survive this many years before death
[2] Totals include 13 individuals diagnosed with AIDS between 1987 and 2001 where the years between AIDS diagnosis and death is unknown; Data Source: MDPH Surveillance Program; Data as of 7/1/04

Technical Notes: Trends in progression to AIDS after HIV infection diagnosis

The following analyses describe progression to an AIDS diagnosis among people who are diagnosed with HIV infection in Massachusetts.

Table 14 describes how many people progressed to AIDS within 2 months of HIV infection diagnosis, between 1 and 2 years, between 2 and 3 years, etc., and those who have not been diagnosed with AIDS, for all people diagnosed with HIV infection from 1999 to 2002.

Table 14 Time from HIV Infection Diagnosis to AIDS Diagnosis by Year of HIV Infection Diagnosis: MA, 1999-2002

	1999		2000		2001		2002	
Time between HIV and AIDS diagnosis	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
<2 months	360	28%	316	28%	298	31%	288	29%
2 months - <1 yr.	157	12%	124	11%	96	10%	90	9%
1 - <2 yr.	56	4%	35	3%	44	5%	33	3%
2 - <3 yr.	33	3%	21	2%	8	1%	7	1%
3 - <4 yr.	19	1%	19	2%	2	<1%	--[1]	--[1]
4 - <5	7	1%	3	<1%	--[1]	--[1]	--[1]	--[1]
5 - <6	3	<1%	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
Have not yet progressed to AIDS	660	51%	605	54%	507	53%	575	58%
Total	1,295	100%	1,123	100%	955	100%	993	100%

[1] Individuals diagnosed with HIV infection in this year have not yet had the opportunity to be living with HIV infection for this many years before progressing to AIDS

Data Source: MDPH Surveillance Program; Data as of 7/1/04